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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,797	12/28/2001	Yukio Tanaka	SEL-205 DIV	2514

7590 10/16/2003
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EXAMINER

NGUYEN, JOHN B

ART UNIT	PAPER NUMBER
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2819

DATE MAILED: 10/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,797

Applicant(s)

TANAKA, YUKIO

Examiner

John B Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-21, 28-33 is/are allowed.
- 6) ☒ Claim(s) 22-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/638,842.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of 35 U.S.C. 102(e) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al.(U.S. Patent No. 6,441,758 B1).

Regarding to claims 22 and 25, Figure 9 and 12, Koyama et al. discloses a D/A conversion circuit for supplying a gradation voltage (V0-V16) corresponding to n-bit digital signal (n is a natural number that is equal to or larger than 2), comprising:

a first DIA conversion circuit (1107) comprising: $(2^x + 1)$ gradation voltage lines (V0-V16);

a first switching circuit (swA) having 2^x first switching elements wherein each one of 2^x first switching elements is electrically connected to each one of the $(2^x + 1)$ gradation voltage lines (V0-V16);

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a first output line (1109-1) electrically connected to the first switching circuit;

a second switching circuit (swB) having 2^x second switching elements wherein each one of 2^x second switching elements electrically connected to each one of $(2^x + 1)$ gradation voltage lines V0-V16); and

a second output line (1109-2) electrically connected to the second switching circuit;

a second D/A conversion circuit (1116) comprising:

2^y resistor elements (R1-R16) connected in series between the first output line and the second output line;

a third switching circuit (swC) having 2^y third switching elements coupled to each other via the 2^y resistor elements; and

a third output line (1117) electrically connected to the third switching circuit; wherein x and y are natural numbers which satisfy $x + y = n$ as claims 22 and 25 discloses.

Regarding to claims 23 and 26, a circuit according to claim 22, wherein the D/A conversion circuit is manufactured on an insulating substrate by using a plurality of thin film transistor (Fig.13-19) as claims 23 and 26 discloses.

Regarding to claims 24 and 27, a circuit according to claim 22, wherein the D/A conversion circuit is utilized in any one of a video camera, a digital camera, a goggle-type display, a car navigation system, a personal computer, a DVD player, and a portable information terminal (column 44, lines 1++) as claims 24 and 27 discloses.

Allowable Subject Matter

3. Claims 16-21, 28-33 are allowed.
4. The following is an examiner's statement of reasons for allowance:

The prior art fails to teach a forth switch element electrically connected to the second and third output lines as called for in claims 16, 28 and 29. Therefore, claims 16-21, 28-33 are presently allowed.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B Nguyen whose telephone number is (703) 308-6039. The examiner can normally be reached on 8AM-4: 30 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on (703) 305-3493. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

John B. Nguyen
September 30, 2003


Michael Tokar
Supervisory Patent Examiner
Technology Center 2800